139,342

PATENT SPECIFICATION

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Complete Left, Oct. 13, 1919.
Complete Accepted, Mar. 4, 1920.

PROVISIONAL SPECIFICATION.

Improvements in or relating to Means or Apparatus for Delivering Measured Quantities of Powdered Granular or Pulverulent Substances.

I, MATTHEW RICHARD SCANLAN, of 17, Lunesdale Avenue, Aintree, Liverpool, in the County of Lancaster, Stationer, do hereby declare the nature of this invention to be as follows:—

This invention relates to means or apparatus particularly suitable for hand actuation, for delivering measured quantities of powdered, granular, or pulverulent substances.

Apparatus according to my invention, comprises a—preferably rectangular—cylinder or casing which is horizontally supported by means of a suitable frame or bracket; on the upper face of said casing there is integrally formed or provided a socket piece having a through passage and which is adapted to receive and support a hopper or like storage receptacle.

In a suitable position in the bottom or floor of said cylinder or casing there is formed an aperture which opens to a chute or passage-way secured to the underside of the casing.

Slidably disposed within said casing, and being a good fit therein, is a slide a portion of which is imperforate and a portion slotted, and in the slot created there is disposed a reciprocable block piece wherein is formed a screw tapped passage adapted to receive a screw threaded rod or spindle which also passes or extends through a screw-tapped passage in the outer transverse end member of the slotted portion of said slide.

On rotating said screw by means of a suitable knob or handle provided on the outer end of same, in one direction or the other, said block may be moved nearer to or further from the adjacent end wall of the imperforate portion of said slide, so that the capacity of the chamber or receptacle formed by said end wall of the slide, the adjacent face of the block, the portions of the two side walls of the slotted part of the slide between said opposed end faces, and the floor of the casing, may be varied as desired.

Formed in said casing is a horizontal slot through which projects a handle secured by screwing or otherwise to said slide, and to obviate shock there may be fitted at the ends of said slot facings of india-rubber or other suitable soft material.

In operation, said block being adjusted in its slide slot to form a chamber or receptacle of desired volume or capacity, said slide is moved in its casing, by means of the handle, under said socket passage so that said chamber receives a charge of the substance which has been supplied to the hopper; the slide is then moved backwards, carrying the charge with it which charge on arriving

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at said aperture in the floor of the casing, falls by gravity down the chute, before described, into a packet or other container.

Preferably, there is provided on said casing a removable cover whereby access to said adjustable block and chamber may be obtained.

Said casing may be hinged or pivoted to its support in order to facilitate the emptying of the hopper when desired.

Means may be provided whereby said screwed rod may be locked when the block is adjusted to the position desired, so that the volume or capacity of the chamber may not be varied by unauthorised persons.

Dated this 9th day of April, 1919.

JOHN HINDLEY WALKER,
139, Dale Street, Liverpool,
Agent for the Applicant.

COMPLETE SPECIFICATION.

Improvements in or relating to Means or Apparatus for Delivering Measured Quantities of Powdered Granular or Pulverulent Substances.

I, MATTHEW RICHARD SCANLAN, of 17, Lunesdale Avenue, Aintree, Liverpool, in the County of Lancaster, Stationer, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to hand-actuated apparatus for delivering measured quantities of powdered, granular, or pulverulent substances, of the type which comprises a horizontal casing in which are formed an inlet opening at the top and a discharge opening (out of vertical alignment with said inlet opening) at the bottom, and a slide disposed within said casing, which embodies a chamber the capacity or volume whereof may be varied by means of an adjustable piece.

In a powder and shot measuring apparatus of this kind, it has been proposed to actuate a measuring cylinder by means of a weighted pin adapted to reciprocate in a horizontal slot provided in a guide chamber. And in another apparatus it has been proposed to actuate a volume-varying-slide by means of a screwed rod in manner similar to that hereinafter described.

The present invention consists in the combination of:—

A horizontally-supported casing, the top and bottom whereof are apertured (said apertures being out of vertical alignment with each other) and a side whereof is longitudinally slotted; a slide block or bar reciprocably disposed within said casing, a portion of which block or bar is slotted, and a portion imperforate; a stop piece adjustably disposed in said slide-slot; a screw-threaded stop-adjusting spindle revolubly anchored to said slide and extending through a screw-tapped passage formed in the transverse end member of the slotted portion thereof; and a slide-actuating handle provided with a shank or extension which projects through said longitudinal casing-slot and is secured to said slide.

I will further describe my invention with the aid of the accompanying sheet of explanatory drawings in which:—

Fig. 1 is a part sectional elevation of the delivery apparatus.

Fig. 2 is a plan, and

Fig. 3 an end view with the slide actuating handle removed.

a represents a rectangular casing which is horizontally supported upon a stand *b*; *c* is a socket piece cast on said casing *a*, and having a through passage *d* which communicates with the interior of the casing; said socket *c* is

adapted to receive the lower end of hopper *e*. *f* is an opening or aperture provided in the floor of casing *a* out of vertical alignment with the top aperture *d*, and *g* is a chute secured to the underside of the casing *a* below aperture *f*. *h* h^1 is a slide bar member reciprocably disposed within said casing *a*, the portion *h* whereof is imperforate and the portion h^1 slotted.

i denotes a stop piece disposed in slot h^1 of said slide, wherein is formed a cavity *j* adapted to receive a screw-threaded rod or spindle *k* which is anchored, whilst being permitted to revolve, by means of screws *l*; said spindle *k* extends through a screw-tapped passage in the transverse end member h^2 of the slotted portion h^1 of said slide.

On rotating said screwed spindle *k* by means of a suitable knob or handle *m* provided on the outer end of same, in one direction or the other, said stop block *i* is moved nearer to or further from the adjacent end wall of the imperforate portion *h* of said slide, so that the capacity of the chamber or receptacle *n* —formed by said end wall of the slide, the adjacent face of the stop block *i*, the portions of the two side walls of the slotted part of the slide between said opposed end faces, and the floor of the casing *a*—may be varied as desired.

Formed in said casing is a longitudinal slot *o* through which projects the shank of handle *p* which screws into the slide portion *h*; to obviate shock there may be fitted at the ends of said slot *o* facings *q* of india-rubber or other suitable soft material.

In operation, said stop block *i* being adjusted in its slide slot h^1 to form a chamber or receptacle *n* of desired volume or capacity, the slide is moved in its casing *a*, by means of the handle *p*, under said opening *d* so that said chamber *n* receives a charge of the substance which has been supplied to the hopper *e*; the slide is then moved backwards, carrying the charge with it, which charge on arriving at said aperture *f* in the floor of the casing falls by gravity down the chute *g*, into a packet or other container.

Preferably there is provided on said casing *a* a removable cover *r* whereby ready access to said adjustable stop block *i* and chamber *n* may be obtained.

Said casing *a* may be hinged or pivotted to its support in order to facilitate the emptying of the hopper, when desired.

Means may be provided whereby said screwed rod *k* may be locked when the stop block *i* is adjusted to the position desired, so that the volume or capacity of the chamber may not be varied by unauthorised persons.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:—

Means or apparatus for delivering measured quantities of powdered, granular, or pulverulent substances, comprising, in combination:—A horizontally-supported casing the top and bottom whereof are apertured (said apertures being out of vertical alignment with each other) and a side whereof is longitudinally slotted; a slide block or bar reciprocably disposed within said casing, a portion of which block or bar is slotted and a portion imperforate; a stop piece adjustably disposed in said slide-slot; a screw-threaded stop-adjusting spindle revolubly anchored to said slide and extending through a screw-tapped passage formed in the transverse end member of the slotted portion thereof; and a slide-actuating handle provided with a shank or extension which projects through said longitudinal casing-slot and is secured to said slide; all substantially as hereinbefore described and illustrated in the drawings annexed hereto.

Dated this 10th day of October, 1919.

JOHN HINDLEY WALKER,
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Agent for the Applicant.

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Fig. 1.

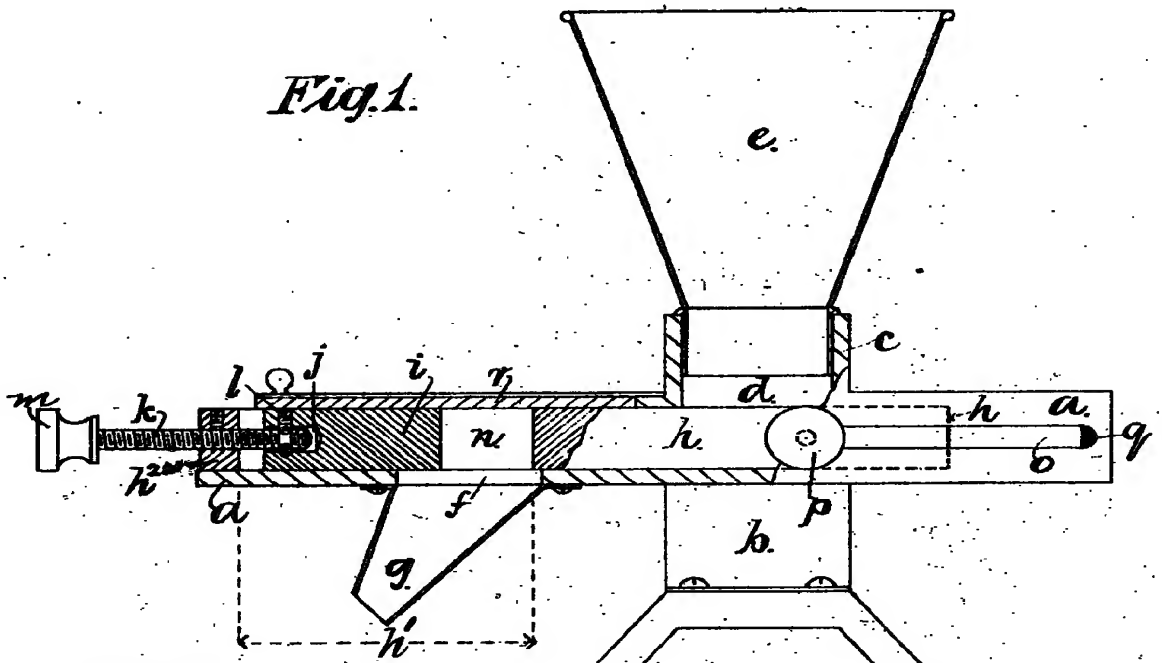


Fig. 3.

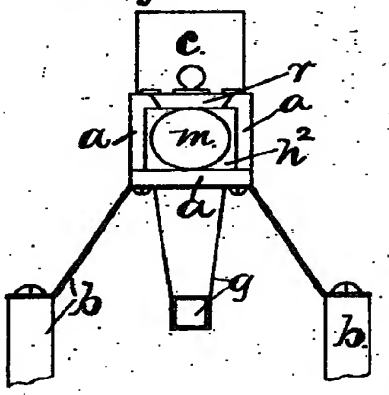
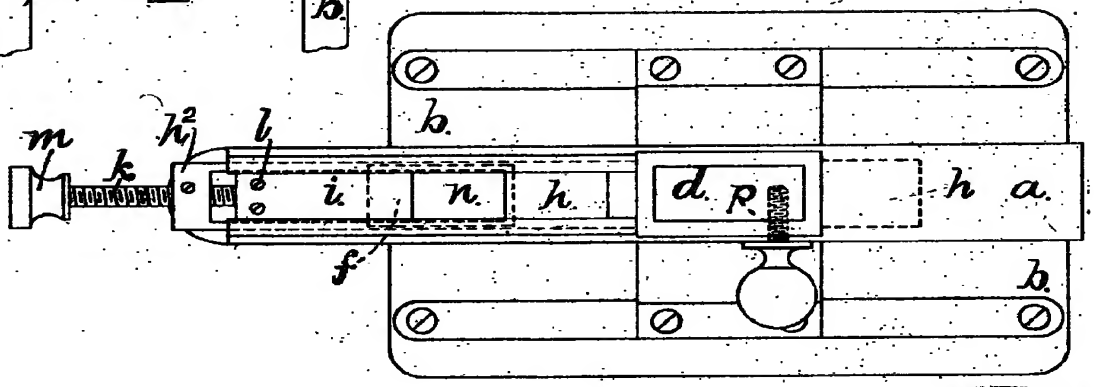


Fig. 2.



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